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REMARKS

Claims 1-24 remain pending in the present application. Basis for the amendments to claims 1, 2, and 14 as to "continuous fibers" is found at page 15, line 24; and as to the upper range of the hydrostatic head to 400 cm at page 17, line 28.

Further, the present application clearly discloses making fine fibers by using an electrospinning apparatus (page 18, lines 1-5). Electrospinning is well-known in the art to result in continuous fibers; see "Electrospinning Process and Applications of Electrospun Fibers", Doshi and Reneker, Journal of Electrostatics, 35 (1995) pp. 151-160, at p. 152, first paragraph; "Nanometre Diameter Fibres of Polymer, Produced by Electrospinning", Reneker and Chun, Nanotechnology, 7 (1996), pp. 216-223, at p. 220, section 2.1; "Electrospinning Technology: Direct Application of Tailorable Ultrathin Membranes", P. Gibson, H.S. Gibson and C. Pentheny, Journal of Coated Fabrics, 28 (1998), pp. 63-73, at p. 64, last paragraph; and "High Modulus Polymers and a Novel Electrospinning Process", Zachariades, Porter, Doshi, Srinivasan and Reneker, Polymer News, 20 (1995), pp. 206-207, at p. 206, second column. (All of record in the present application). Thus, it is clear that the electrospun fibers of the present application are inherently continuous.

The change in the basis weight range of claim 5 is supported in Table 4, Example 1 at page 21; and that of claim 6 in previously amended claim 5. No new matter is added.

Election of Species Requirement

Applicants acknowledge their election of the species represented by claim 16, pursuant to the requirement made by the Examiner. Applicants respectfully request consideration of additional species in view of the allowability of the 'generic' claims, as explained below.

Claim Objections

Applicants believe that all instances of the abbreviation "FF" have been replaced with the term "fine fiber", which is defined at page 22, lines 20-24.

Rejection under 35 U.S.C. §112, first paragraph

Claims 5 and 6 stand rejected under 35 U.S.C. §112, first paragraph, for failing to find basis in the written description. Applicants traverse this basis for rejection and respectfully request reconsideration and withdrawal thereof.

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The Examiner recognizes that the amended basis weight ranges are supported in Table 5, but argues that there is no indication that those basis weights are directed to the weight of the barrier layer.

The Examiner's attention is directed to the heading of column 2 of Table 5, which is indicated as "fiber load". Likewise, attention is directed to page 19 of the specification, wherein Applicants disclose the meaning of "fiber loading" (lines 22-25), which indicates that the values expressed (in g/m²) are the loadings of fine fibers, which are invariably indicated as being a "barrier layer" in the application.

Reconsideration of the rejection is requested.

Rejection under 35 U.S.C. §102(e)/103(a) over Zucker

Claims 1-4, 7-9, 13, 14, and 16 stand rejected under 35 U.S.C. §102(e)/103(a) as anticipated by or obvious over Zucker (U.S. Published Application No. 2003/0129909). Applicants traverse this basis for rejection and respectfully request reconsideration and withdrawal thereof.

Initially, it is noted that Zucker is a "paper patent", having no examples of fabrics made according to the specification thereof. Zucker is directed to nonwoven compound fabrics having one or more layers of nano-denier continuous filaments, wherein the nano-denier filaments have diameters of less than or equal to 1000 nm, preferably less than or equal to 500 nm (Abstract). As enablement for a manner of making such 'nano-denier' filaments, Zucker points to U.S. Patent Nos. 5,678,379 and 6,114,017 (Fabbicante et al., later cited by the Examiner), incorporating them by reference [0017] and [0018].

Fabbicante et al. does disclose a manner of making continuous filaments by meltblowing. However, Fabbicante et al. disclose that in order to make filaments having diameters of "as fine as 0.1 micron", the fibers are discontinuous and made using supersonic nozzles (col. 2, lines 49-51). Fabbicante et al. disclose that when using a series of converging-diverging nozzles that are capable of producing supersonic drawing velocities, fine fibers having diameters of from 0.1 to 2 microns in diameter can be made (col. 3, lines 58-65). Referring to Fig. 4, Fabbicante et al. disclose that the use of two incident supersonic flows impinging on fibers exiting the spinning nozzle results in very high drafting and breaking forces to form very fine (less than 1 micron diameter) short fibers (col. 6, lines 50-53). In the exemplary data, Fabbicante et al. indicate that continuous fibers having diameters of 12.1 microns were formed (col. 9, lines 1-18). Only when an apparatus as described in Fig. 4 thereof was used, did Fabbicante et al. obtain fibers having diameters of less than 1 micron (col. 9, lines 23-46). The skilled artisan would expect that the Fabbicante et al. process for producing fibers having diameters less than 2 microns, and especially

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those described at column 9, lines 23-26, having diameters of only 0.5 micron, would make only short, discontinuous fibers, and not continuous fibers as suggested by Zucker.

In further support of Applicants' arguments, the Examiner's attention is directed to Torobin et al. (U.S. Patent No. 6,183,670) at column 7, lines 25-30, wherein patentees disclose that it is known to make discontinuous sub-micron fibers by meltblowing.

Accordingly, it is clear that the method and apparatus of Fabbriante et al. is not useful to make sub-micron diameter continuous fibers, and therefore Zucker does not contain an enabling disclosure as to such sub-micron or 'nano-denier' continuous fibers. As such, Zucker cannot be said to provide those of skill in the art with an enabling disclosure as to how to make sub-micron diameter continuous polymeric fibers, and therefore cannot be deemed to make obvious the present claims. Withdrawal of the rejection is requested on this basis.

Rejection under 35 U.S.C. §103(a) over Zucker

Claims 12 stands rejected under 35 U.S.C. §103(a) as obvious over Zucker. Applicants traverse this basis for rejection and respectfully request reconsideration and withdrawal thereof.

As stated above, Zucker is fatally defective as it does not adequately enable those skilled in the art to make sub-micron diameter continuous polymeric fibers, and therefore cannot be deemed to make obvious the present claims. Withdrawal of the rejection is requested on this basis.

**Rejection under 35 U.S.C. §103(a) over Zucker
in view of Fabbriante et al.**

Claims 5 and 6 stand rejected under 35 U.S.C. §103(a) as obvious over Zucker in view of Fabbriante et al. Applicants traverse this basis for rejection and respectfully request reconsideration and withdrawal thereof.

As clearly set forth above, neither of Zucker or Fabbriante et al. would enable those of skill in the art to make sub-micron diameter continuous polymeric fibers, and therefore cannot be deemed to make obvious the present claims. Withdrawal of the rejection is requested on this basis.

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Rejection under 35 U.S.C. §103(a) over Zucker
in view of Benson et al.

Claims 10 and 11 stand rejected under 35 U.S.C. §103(a) as obvious over Zucker in view of Benson et al. (U.S. Patent No. 6,746,517). Applicants traverse this basis for rejection and respectfully request reconsideration and withdrawal thereof.

As clearly set forth above, Zucker fails to enable those of skill in the art to make sub-micron diameter continuous polymeric fibers, and therefore, even in combination with Benson et al., cannot be deemed to make obvious the present claims. Withdrawal of the rejection is requested on this basis.

Rejection under 35 U.S.C. §103(a) over Zucker
in view of Healey

Claims 10 and 11 stand rejected under 35 U.S.C. §103(a) as obvious over Zucker in view of Healey (U.S. Patent No. 6,554,881). Applicants traverse this basis for rejection and respectfully request reconsideration and withdrawal thereof.


As clearly set forth above, Zucker fails to enable those of skill in the art to make sub-micron diameter continuous polymeric fibers, and therefore, even in combination with Healey, cannot be deemed to make obvious the present claims. Withdrawal of the rejection is requested on this basis.

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In view of the foregoing, allowance of the above-referenced application is respectfully requested.

Respectfully submitted,



THOMAS W. STEINBERG
ATTORNEY FOR APPLICANT
Registration No.: 37,013
Telephone: (302) 892-0887
Facsimile: (302) 892-7343

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